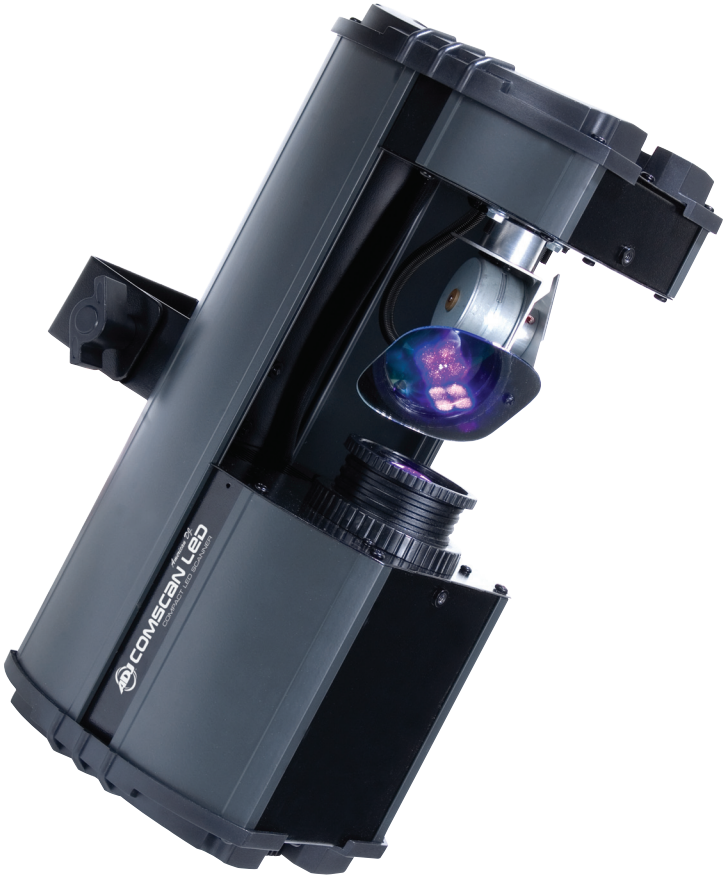
American DJ®

COMSCAN LED

COMPACT LED SCANNER



User Instructions

Rev. 4/10

Unpacking: Thank you for purchasing the Comscan LED by American DJ®. Every Comscan LED has been thoroughly tested and has been shipped in perfect operating condition. Carefully check the shipping carton for damage that may have occurred during shipping. If the carton appears to be damaged, carefully inspect your fixture for any damage and be sure all equipment necessary to operate the unit has arrived intact. In the event damage has been found or parts are missing, please contact our toll free customer support number for further instructions. Please do not return this unit to your dealer without contacting customer support first.

Introduction: The Comscan LED is a five channel DMX intelligent, LED scanner. The Comscan LED can operate as a stand alone fixture or in a Master/Slave configuration. The Comscan LED has three operating modes; sound active mode, show mode and DMX control. *For best results use fog or special effects smoke to enhance the beams projections.*

Customer Support: American DJ® provides a toll free customer support line, to provide help and to answer any question should you encounter problems during your set up or initial operation. You may also visit us on the web at www.americandj.com for any comments or suggestions. Service Hours are Monday through Friday 9:00 a.m. to 4:30 p.m. Pacific Standard Time.

Voice: (800) 322-6337
Fax: (323) 582-2941
E-mail: support@americandj.com

To purchase parts online visit http://parts.americandj.com

Warning! To prevent or reduce the risk of electrical shock or fire, do not expose this unit to rain or moisture.

Warning! *This may cause severe eye damage. Avoid looking directly into the light source at all times!*

Comscan LED General Instructions

To optimize the performance of this product, please read these operating instructions carefully to familiarize yourself with the basic operations of this unit. These instructions contain important safety information regarding the use and maintenance of this unit. Please keep this manual with the unit, for future reference.

Comscan LED Features

- DMX-512 Protocol Compatible (Five DMX Channels)
- X/Y Mirror Control
- 3 Operating Modes - Sound Active, Show Mode, and DMX Control
- Internal Microphone
- Digital Display for Address and Function Setting
- UC3 Controller (Not Included)

Comscan LED Warranty Registration

The Comscan LED carries a 3 year (1095 days) limited warranty. Please fill out the enclosed warranty card to validate your purchase and warranty. You may also register your product online at www.americandj.com. All returned service items whether under warranty or not, must be freight pre-paid and accompany a return authorization (R.A.) number. If the unit is under warranty you must provide a copy of your proof of purchase invoice. Please contact American DJ® customer support for a R.A. number.

Comscan LED Handling Precautions

Caution! There are no user serviceable parts inside this unit. Do not attempt any repairs yourself, doing so will void your manufactures warranty. In the unlikely event your unit may require service please contact American DJ®.

American DJ® will not accept any liability for any resulting damages caused by the non-observance of this manual or any unauthorized modification to this unit.

Comscan LED Safety Precautions

For Your Own Personal Safety, Please Read and Understand This Manual Completely Before You Attempt To Install Or Operate This Unit!

- To reduce the risk of electrical shock or fire, do not expose this unit rain or moisture
- Do not spill water or other liquids into or on to your unit.
- Be sure that the local power outlet match that of the required voltage for your unit.
- Do not attempt to operate this unit if the power cord has been frayed or broken.
- Do not attempt to remove or break off the ground prong from the electrical cord. This prong is used to reduce the risk of electrical shock and fire in case of an internal short.
- Disconnect from main power before making any type of connection.
- Do not remove the cover under any conditions. There are no user serviceable parts inside.
- Never operate this unit when it's cover is removed.
- Always be sure to mount this unit in an area that will allow proper ventilation. Allow about 6" (15cm) between this device and a wall.
- Do not attempt to operate this unit, if it becomes damaged.
- This unit is intended for indoor use only, use of this product outdoors voids all warranties.
- Always mount this unit in safe and stable matter.
- Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.
- Cleaning -The fixture should be cleaned only as recommended by the manufacturer. See page 15 for cleaning details.
- Heat -This fixture should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
- The fixture should be serviced by qualified service personnel when:
  A. Objects have fallen, or liquid has been spilled into the appliance.
  B. The appliance has been exposed to rain or water.
  C. The appliance does not appear to operate normally or exhibits a marked change in performance.

Power Supply: The American DJ® Comscan LED contains an electronic ballast, which will auto sense the voltage when it is plugged into the power source. With the electronic ballast you do not need to worry about wall voltage, this unit can be plugged in anywhere. Also be sure to only use the included I.E.C. power cable supplied with the unit.

DMX-512: *DMX is short for Digital Multiplex. This is a universal protocol used by most lighting and controller manufactures as a form of communication between intelligent fixtures and controllers.* A DMX controller sends DMX data instructions from the controller to the fixture. DMX data is sent as serial data that travels from fixture to fixture via the DATA "IN" and DATA "OUT" XLR terminals located on all DMX fixtures (most controllers only have a DATA "OUT" terminal).

DMX Linking: DMX is a language allowing all makes and models of different manufactures to be linked together and operate from a single controller, as long as all fixtures and the controller are DMX compliant. *To ensure proper DMX data transmission, when using several DMX fixtures try to use the shortest cable path possible. The order in which fixtures are connected in a DMX line does not influence the DMX addressing. For example; a fixture assigned a DMX address of 1 may be placed anywhere in a DMX line, at the beginning, at the end, or anywhere in the middle. Therefore, the first fixture controlled by the controller could be the last fixture in the chain. When a fixture is assigned a DMX address of 1, the DMX controller knows to send DATA assigned to address 1 to that unit, no matter where it is located in the DMX chain.*

Data Cable (DMX Cable) Requirements (For DMX and Master/Slave Operation): The Comscan LED can be controlled via DMX-512 protocol. The Comscan LED is a five channel DMX unit. The DMX address is set electronically using the controls on the rear panel of the unit. Your unit and your DMX controller require a approved DMX-512 110 Ohm Data cable for data input and data output (Figure 1). We recommend Accu-Cable DMX cables. If you are making your own cables, be sure to use standard 110-120 Ohm shielded cable (This cable may be purchased at almost all professional sound and lighting stores). Your cables should be made with a male

Figure 1

and female XLR connector on either end of the cable. Also remember that DMX cable must be daisy chained and cannot be split.

Notice: Be sure to follow figures two and three when making your own cables. Do not use the ground lug on the XLR connector. Do not connect the cable's shield conductor to the ground lug or allow the shield conductor to come in contact with the XLR's outer casing. Grounding the shield could cause a short circuit and erratic behavior.

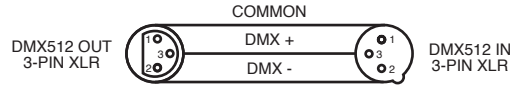
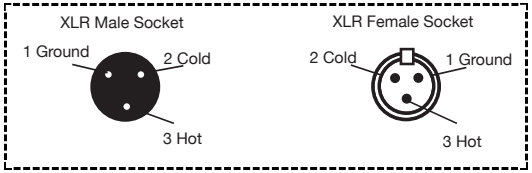


Figure 2



XLR Pin Configuration
Pin 1 = Ground
Pin 2 = Data Compliment (negative)
Pin 3 = Data True (positive)

Figure 3

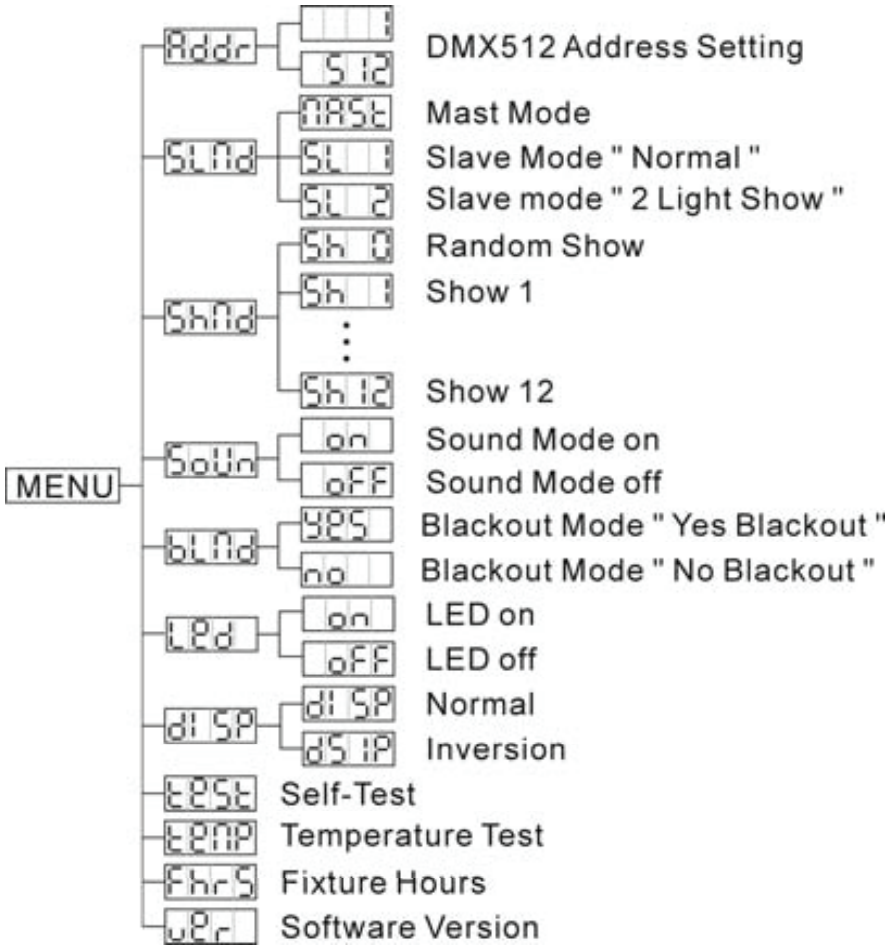
Special Note: Line Termination. When longer runs of cable are used, you may need to use a terminator on the last unit to avoid erratic behavior. A terminator is a 110-120 ohm 1/4 watt resistor which is connected between pins 2 and 3 of a male XLR connector (DATA + and DATA -). This unit is inserted in the female XLR connector of the last unit in your daisy chain to terminate the line. Using a cable terminator (ADJ part number Z-DMX/T) will decrease the possibilities of erratic behavior.

Termination reduces signal errors and avoids signal transmission problems and interference. It is always advisable to connect a DMX terminal, (Resistance 120 Ohm 1/4 W) between PIN2 (DMX-) and PIN3 (DMX+) of the last fixture.

Figure 4

5-Pin XLR DMX Connectors. Some manufactures use 5-pin DMX-512 data cables for DATA transmission in place of 3-pin. 5-pin DMX fixtures may be implemented in a 3-pin DMX line. When inserting standard 5-pin data cables in to a 3-pin line a cable adaptor must be used, these adaptors are readily available at most electric stores. The chart below details a proper cable conversion.

3-Pin XLR to 5-Pin XLR Conversion		
Conductor	3-Pin XLR Female (Out)	5-Pin XLR Male (In)
Ground/Shield	Pin 1	Pin 1
Data Compliment (- signal)	Pin 2	Pin 2
Data True (+ signal)	Pin 3	Pin 3
Not Used		Pin 4 - Do Not Use
Not Used		Pin 5 - Do Not Use



System Menu: When making adjustments you can press ENTER to confirm your setup or you can wait 8 seconds for automatic setup. To exit without making any adjustments press the MENU button.

ADDR - **DMX Address Setting**.

1. Tap the either the MENU, UP, or DOWN buttons until "ADDR" is displayed, press ENTER.

2. The current address will now be displayed and flashing. Press the UP or DOWN buttons to find your desired address. Press ENTER to set your desired DMX address.

SLMD - **This will let you set unit as a master or slave in a master/slave configuration.**

1. Tap the MENU button until "SLMD" is displayed, press ENTER. Either "SL 1" or "SL 2" will be displayed.

2. Tap the UP or DOWN buttons until your desired setting is displayed, press ENTER to confim.

NOTE: In a Master/Slave configuration you can set one fixture to Master and then set the next fixture to "SL 2", the fixtures will now have contrast movement to each other.

SHND: SH 0 - 12 - Show modes 0-12 (Factory programs). **You can run show mode with sound active mode off or on.**

1. Tap the MENU button until "SHND" is displayed, press ENTER.

2. "Sh X" will now be displayed, "X" representing a number between 0-12. Programs 1-12 are factory programs, while "Sh 0" is random mode. Press the UP or DOWN buttons to find your desired show and press the ENTER, then press and hold the MENU button for at least 3 seconds to confirm.

SOUN - **Sound Active mode.**

1. Tap the MENU button until "SOUN" is displayed, press ENTER.

2. The display will show either "ON" or "OFF". Press the UP or DOWN buttons to select "ON" to activate sound active mode, or "OFF" to deactivate sound active mode.

3. Press ENTER to confirm.

BLND - **Blackout or Stand by mode.**

1. Tap the MENU button until "BLND" is displayed, press ENTER. Either Yes or No will be displayed.

2. To activate Blackout tap the UP or DOWN buttons until "Yes" is displayed, press ENTER to confim. The fixture will now be in Blackout mode. To deactivate Blackout mode, select "No" and press Enter.

LED - **With this function you can have the LED display turn off after 10 seconds.**

1. Tap the MENU button until "LED" is displayed, press ENTER.

2. The display will show either "ON" or "OFF". Press the UP or DOWN buttons to select "ON" to keep the LED display on at all times, or "OFF" to switch to have the LED display switch off after 10 seconds.

3. Press ENTER to confirm.

DISP - **This function will reverse the display 180°.**

1. Tap the MENU button until "DISP" is displayed, press ENTER.

2. Press ENTER to "flip" the display. Press ENTER to "flip" it again. Press ENTER when you have made your desired setup.

TEST - This function will run a self test program.

1. Tap the MENU button until "TEST" is displayed, press ENTER.

2. The fixture will now run a self test.

TEMP - With this function you can check the temperature of the fixture.

1. Tap the MENU button until "TEMP" is displayed, press ENTER.

2. The temperature of the fixture will now be displayed. Press MENU to exit.

FHRS - With this function you can display the running time of the fixture.

1. Tap the MENU button until "FHRS" is displayed, press ENTER.

2. The running time of the fixture will now be displayed. Press MENU to exit.

VER - With this function you can display the version software of the fixture.

1. Tap the MENU button until "VER" is displayed, press ENTER.

2. The software version will now be displayed. Press MENU to exit.

Operating Modes: *The Comscan LED can operate in three different modes. In each mode you can run the fixture as a stand alone fixture or in a master/slave confiugration. This next section will detail the differences in the operating modes.*

- ***Sound Active mode -***

The fixture will react to sound, chasing through the built-in programs.

- ***Show mode -***

Choose 1 of 12 show modes to run.

- ***DMX control mode -***

This function will allow you to control each individual fixtures traits with a standard DMX-512 controller such as the Elation® Show Designer.™

Master-Slave Operation This function will allow you to link up to 16 units together and operate without a controller. The units will be sound activated. In Master-Slave operation one unit will act as the controlling unit and the others will react to the controlling units programs. Any unit can act as a Master or as a Slave.

1. Using approved DMX data cables, daisy chain your units together via the XLR connector on the rear of the units. Remember the Male XLR connector is the input and the Female XLR connector is the output. The first unit in the chain (master) will use the female XLR connector only - The last unit in the chain will use the male XLR connector only. For longer cable runs we suggest a terminator at the last fixture.
2. On the Master unit find your desired show and set that show by pressiing the ENTER button.
3. On the slave units tap the MENU button until "SLAV" is displayed, and Press ENTER.
4. The slave units will now follow the Master unit.

Universal DMX Control: This function allows you to use a Elation® universal DMX-512 controller to control the chases and patterns, dimmer and strobe. A DMX controller allows you to create unique programs tailored to your individual needs.

1. The Comscan LED is a five DMX channel DMX fixture. See page 14 for a detailed description of the DMX values and traits.
2. To control your fixture in DMX mode, follow the set-up procedures

on pages 5-7 as well as the set-up specifications that are included with your DMX controller.
3. Use the controller's faders to control the various DMX fixture traits.
4. This will allow you to create your own programs.
5. Follow the instructions on page 9 to set the DMX address.
6. For longer cable runs (more than a 100 feet) use a terminator on the last fixture.
7. For help operating in DMX mode consult the manual included with your DMX controller.

Sound Active Mode: This mode allows either single unit or several units linked together, to run to the beat of the music.

1. Tap the MENU button until "SOUN" is displayed, and press ENTER.
2. Press ENTER then press and hold MENU for 3 seconds to cofirm.
3. The optional *UC3 Controller* (not included) may be used to control different functions including blackout.

Show Mode: In this mode you can choose 1 of 12 show modes to run.

1. Tap the MENU button until "SHND" is displayed, and press ENTER.
2. Tap the UP or DOWN buttons until you find your desired show, and press ENTER then press and hold MENU for 3 seconds to confirm. See page 9 for more info.
3. The optional *UC3 Controller* (not included) may be used to control different functions including blackout.

Blackout	Blackout the unit		
Function	1. Synchronous Strobe 2. Two light Strobe 3. Sound Strobe	Show Select (show0-12)	Gobo Select (8+open)
Mode	Sound/Strobe (LED OFF)	Chase (LED ON)	Gobo (LED blinking)

Channel	Value	Function
1	0 - 255	PAN
2	0 - 255	TILT
3		STROBE
	0 - 7	BLACKOUT
	8 - 15	OPEN
	16 - 131	STROBING SLOW - FAST
	132 - 139	OPEN
	140 - 181	SLOW OPEN - FAST CLOSE
	182 - 189	OPEN
	190 - 231	FAST OPEN - SLOW CLOSE
	232 - 239	OPEN
	240 - 247	RANDOM STROBE
	248 - 255	OPEN
4		GOBO WHEEL
	0 - 7	OPEN
	8 - 14	GOBO 1
	15 - 21	GOBO 2
	22 - 28	GOBO 3
	29 - 25	GOBO 4
	36 - 42	GOBO 5
	43 - 49	GOBO 6
	50 - 56	GOBO 7
	57 - 63	GOBO 8
	64 - 71	OPEN SHAKE
	72 - 78	GOBO 1 SHAKE
	79 - 85	GOBO 2 SHAKE
	86 - 92	GOBO 3 SHAKE
	93 - 99	GOBO 4 SHAKE
	100 - 106	GOBO 5 SHAKE
	107 - 113	GOBO 6 SHAKE
	114 - 120	GOBO 7 SHAKE
	121 - 127	GOBO 8 SHAKE
	128 - 255	GOBO WHEEL ROTATION SLOW - FAST
5	0 - 255	MASTER DIMMER 0% - 100%

Locate and remove the unit's power cord. Once the cord has been removed located the fuse holder located inside the power socket. Insert a flat-head screw driver into the power socket and gently pry out the fuse holder. Remove the bad fuse and replace with a new one. The fuse holder has a built-in socket for a spare fuse be sure not to confuse the spare fuse with active fuse.

Fixture Cleaning: Due to fog residue, smoke, and dust cleaning the internal and external optical lenses and mirror should be carried out periodically to optimize light output. Cleaning frequency depends on the environment in which the fixture operates (I.e. smoke, fog residue, dust, dew). In heavy club use we recommend cleaning on a monthly basis. Periodic cleaning will ensure longevity, and crisp output.

1. Use normal glass cleaner and a soft cloth to wipe down the outside casing.
2. Use a brush to wipe down the cooling vents and fan grill.
3. Clean the external optics and mirror with glass cleaner and a soft cloth every 20 days.
4. Clean the internal optics with glass cleaner and a soft cloth every 30-60 days.
5. Always be sure to dry all parts completely before plugging the unit back in.

Trouble Shooting: Listed below are a few common problems that you may encounter, with solutions.

No light output from the unit;

1. Be sure you have connected your unit into a standard 120v wall outlet.
2. Be sure the external fuse has not blown. The fuse is located on the rear panel of the unit.
3. Be sure the fuse holder is completely and properly seated.

Unit does not respond to sound;

1. Low frequencies (bass) should cause the unit to react to sound. Tapping on the microphone, quiet or high pitched sounds may not activate the unit.

MANUFACTURER'S LIMITED WARRANTY

A. American DJ, Inc. hereby warrants, to the original purchaser, American DJ and American Audio products to be free of manufacturing defects in material and workmanship for a prescribed period from the date of purchase (see specific warranty period on reverse). This warranty shall be valid only if the product is purchased within the United States of America, including possessions and territories. It is the owner's responsibility to establish the date and place of purchase by acceptable evidence, at the time service is sought.

B. For warranty service you must obtain a Return Authorization number (RA#) before sending back the product. Contact American DJ, Inc. Service Department at 800-322-6337. Send the product only to the American DJ, Inc. factory. All shipping charges must be pre-paid. If the requested repairs or service (including parts replacement) are within the terms of this warranty, American DJ, Inc. will pay return shipping charges only to a designated point within the United States. If the entire instrument is sent, it must be shipped in it's original package. No accessories should be shipped with the product. If any accessories are shipped with the product, American DJ, Inc. shall have no liability whatsoever for loss of or damage to any such accessories, nor for the safe return thereof.

C. This warranty is void if the serial number has been altered or removed; if the product is modified in any manner which American DJ, Inc. concludes, after inspection, affects the reliability of the product; if the product has been repaired or serviced by anyone other than the American DJ, Inc. factory unless prior written authorization was issued to purchaser by American DJ, Inc.; if the product is damaged because not properly maintained as set forth in the instruction manual.

D. This is not a service contract, and this warranty does not include maintenance, cleaning or periodic check-up. During the period specified above, American DJ, Inc. will replace defective parts at its expense with new or refurbished parts, and will absorb all expenses for warranty service and repair labor by reason of defects in material or workmanship. The sole responsibility of American DJ, Inc. under this warranty shall be limited to the repair of the product, or replacement thereof, including parts, at the sole discretion of American DJ. All products covered by this warranty were manufactured after January 1, 1990, and bear identifying marks to that effect.

E. American DJ, Inc. reserves the right to make changes in design and/or improvements upon its products without any obligation to include these changes in any products theretofore manufactured. No warranty, whether expressed or implied, is given or made with respect to any accessory supplied with products described above. Except to the extent prohibited by applicable law, all implied warranties made by American DJ, Inc. in connection with this product, including warranties of merchantability or fitness, are limited in duration to the warranty period set forth above. And no warranties, whether expressed or implied, including warranties of merchantability or fitness, shall apply to this product after said period has expired. The consumer's and/or Dealer's sole remedy shall be such repair or replacement as is expressly provided above; and under no circumstances shall American DJ, Inc. be liable for any loss or damage, direct or consequential, arising out of the use of, or inability to use, this product.

This warranty is the only written warranty applicable to American DJ and American Audio Products and supersedes all prior warranties and written descriptions of warranty terms and conditions heretofore published.

MANUFACTURER'S LIMITED WARRANTY PERIODS:

- All American Audio Products = 1-year (365 day) Limited Warranty (except V-Plus Series Amplifiers)
- All American Audio V-Plus Series Amplifiers = 3-year (1095 day) Limited Warranty
- American DJ Lighting and American DJ Branded Products = 1-year (365 day) Limited Warranty (Such as: Special Effect Lighting, Intelligent Lighting, UV lighting, Strobes, Fog Machines, Bubble Machines, Mirror Balls, Par Cans, Trussing, Lighting Stands etc. excluding Laser Products, lamps, and Star Tec Series)
- American DJ Laser Products and Star Tec Products = 90-Day Limited Warranty
- American DJ L.E.D. Products = 3-year (1095 day) Limited Warranty (excluding motors which have a 1-year (365 day Limited Warranty)

Comscan LED Notes

Model:	Comscan LED
Voltage:	100 ~ 240V 50Hz/60Hz “Auto Sensing”
LEDs:	1 X 10 Watt LED
Power Consumption:	30W
Dimensions:	13.5”(L) x 6.25”(W) x 8”(H) 344mm x 160mm x 200mm
Weight:	8 Lbs. / 3.6 kgs.
Beam Angle:	13 Degrees
Pan:	166 Degree (DMX); 104 Degree (Sound Active)
Tilt:	54 Degree (DMX); 40 Degree (Sound Active)
Gobos/Colors:	8 + Spot
Fuse:	2 Amp
Duty Cycle:	None
DMX:	5 DMX Channels
Sound Active:	Yes
Working Position:	Any Safe, Secure Position
Operating Temperature:	Do Not Operate in Temperatures above 104° Fahrenheit
Warranty:	3 Year (1095 days)

Auto Sensing Voltage: *This fixture contains a electronic ballast, which will auto sense the voltage when it is plugged into the power source.*

Please Note: *Specifications and improvements in the design of this unit and this manual are subject to change without any prior written notice.*

American DJ®
American DJ World Headquarters:
6122 S. Eastern Ave. Los Angeles, CA 90040 USA
Tel: 323-582-2650 / Fax: 323-725-6100
Web: www.americandj.com / E-mail: info@americandj.com

American DJ Europe
Junostraat 2
6468 EW Kerkrade
Netherlands
service@americandjeurope.com / www.americandjeurope.com
Tel: +31 45 546 85 00 / Fax: +31 45 546 85 99